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## **LABORATORY QUALIFICATION PROGRAM**

The District Materials Office will qualify the other laboratories and maintain records of the qualification for three years. The District Staff will check the following prior to qualifying a laboratory:

1. Establish the type of laboratory (Aggregate, Hot Mix Asphalt, PC Concrete).
2. Check for current manuals and test procedures covering the qualified testing.
3. Check the certification of the testing personnel.
4. Document that proper equipment is available to perform qualified testing.
5. Check documentation system.

Scheduling of the qualification review will be discussed with the laboratories seeking qualification. The District Materials Engineer should be contacted for laboratories that have been qualified in other states. The District Materials Office may qualify a laboratory based on an acceptable qualification report and qualification program from another state transportation agency.

Table 1 and the pages following cover the list of items to be reviewed.

An oral close out on any deficiencies will be held with the testing personnel. Written notice will be sent within two weeks of the inspection. District personnel will re-inspect after correction of any deficiencies.

A form showing the laboratory type, the date qualified, and the expiration date will be issued by the District Materials Engineer.

The list of Qualified Laboratories will be maintained on a database accessible by authorized Materials Personnel.

### **NON-COMPLIANCE/ DISPUTE RESOLUTION**

A laboratory that does not meet the requirements of the IM is subject to elimination from the qualification program.

The office responsible for the qualification will resolve disputes concerning calibration and correlation of equipment. For disputes that cannot be resolved at the District level, the Central Materials Laboratory will be the final authority.

**Table 1 - Laboratory Qualification Checklist**

	√	Calib./Verif. Interval	Calib./Verif. Procedure
Tester Qualifications-Proper Iowa DOT certifications			
Current Written Test Procedures			
Current Calibration Procedures & Records			
Documentation of correlation results and corrective actions taken for previous construction season.			
<b>Aggregate Laboratory</b>			
Balances		12 months	Iowa 917-B
Sieves- wear, tear, size, and opening size		12 months	Iowa 1506-A
Splitter- condition		12 months	(visual)
Mechanical Shakers- condition (if used)		12 months	Iowa 1502-A
<b>HMA Laboratory</b>			
Balances- and water bath		12 months	Iowa 917-B
Sieves- wear, tear, size, and opening size		12 months	Iowa 1506-A
Splitter- condition		12 months	(visual)
Mechanical Shakers- condition (if used)		12 months	Iowa 1502-A
Rice equipment- vacuum and flask		12 months	<a href="#">IM 350</a>
Thermometers		12 months	Iowa 1507-A
Ovens- temperatures		12 months	Iowa 1501-A
Gyratory Compactor and molds		12 months	Iowa 1524-A
Marshall Hammer and molds		12 months	Correlation Checks
<b>PCC Laboratory</b>			
Balances		12 months	Iowa 917-B
Sieves- wear, tear, size, and opening size		12 months	Iowa 1506-A
Splitter- condition		12 months	(visual)
Mechanical Shakers- condition (if used)		12 months	Iowa 1502-A
Air Meter		12 months	<a href="#">IM 318</a>
Slump Cone and equipment-condition		12 months	
Beam Breaker		12 months	Central Lab



## Iowa Department of Transportation

### MATERIALS LABORATORY QUALIFICATION PROGRAM

Laboratory Inspection - per Materials Instructional Memorandum 208

Company Name: \_\_\_\_\_

Laboratory name: \_\_\_\_\_

Laboratory type:                      Aggregate                      **HMA**                      PCC                      (Circle one)

Laboratory location: \_\_\_\_\_

Laboratory contact person: \_\_\_\_\_

Laboratory technician:                      Certification number:                      Expires:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Current manuals and written test procedures available? \_\_\_\_\_

Current calibration procedures and records? \_\_\_\_\_

\_\_\_\_\_

Documentation of correlation results and corrective actions taken for previous construction season? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Proper equipment available to perform qualified testing? \_\_\_\_\_

\_\_\_\_\_

Other remarks: \_\_\_\_\_

\_\_\_\_\_

Date of inspection: \_\_\_\_\_ Qualification expiration date: \_\_\_\_\_

Inspection performed by: \_\_\_\_\_

print name

sign name

Inspection received by: \_\_\_\_\_

print name

sign name

**District Number** \_\_\_\_\_

cc: Materials Engineer, Contractor/Producer, Ames, File



## Iowa Department of Transportation

### AGGREGATE LABORATORY INSPECTION QUALITY CONTROL CHECKLIST

Contractor/Producer: \_\_\_\_\_ Location: \_\_\_\_\_  
Certified Technician: \_\_\_\_\_ Certification No: \_\_\_\_\_

Balances	(Iowa Test Method 917-B)	Yes	No
	Updated balance calibration records available?	_____	_____
	Check balance using 500 gm & 1000 gm calibrated weights?	_____	_____
	Is balance accurate to 0.1%?	_____	_____
Sieves			
	Is there adequate correlation history to qualify?	_____	_____
	Were go/no-go gauges used to check accuracy?	_____	_____
	Are the sieves in good condition (no loose frames, holes, or tears)?	_____	_____
Splitter			
	Is the splitter in good condition?	_____	_____
	(i.e., missing shuts, cracked welds, or leaking seams)		
Shaker			
	Is shaker apparatus secure and level?	_____	_____
Scale			
	Are the laboratory weights used for routine calibrations accurate?	_____	_____
	(Use 0.1% difference from our calibrated weights as standard.)		

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

cc: Materials Engineer  
Contractor/Producer  
Ames  
File

Inspected By: \_\_\_\_\_  
Date Inspected: \_\_\_\_\_



Iowa Department of Transportation

**HMA LABORATORY INSPECTION  
QUALITY CONTROL CHECKLIST**

Contractor/Producer: \_\_\_\_\_ Location: \_\_\_\_\_

Certified Technician: \_\_\_\_\_ Certification No.: \_\_\_\_\_

<b>Thermometers</b>	(IM 321, IM 325, IM 325G, IM 350)	<b>Yes</b>	<b>No</b>
Thermometer Calibration and Documentation available?		_____	_____
Temperature of check: _____ (25 deg C or 135 deg C)			
State reference thermometer	_____		
Contractor reference thermometer	_____		
<b>Difference</b>	_____		

<b>Rice Pycnometer</b>	(IM 350)		
Calibration chart and/or documentation available?		_____	_____
Equipment achieves between 25.5 and 30mm of mercury vacuum?		_____	_____
Mercury is free of bubbles?		_____	_____

<b>Gyratory/Marshall Compactor</b>	(IM 325/IM 325G)		
Calibration documentation available?		_____	_____
Is equipment generally clean?		_____	_____
Documentation of annual mold measurements?		_____	_____

<b>Ovens</b>	(IM 325/IM 325G)		
Documentation of temperature checks?		_____	_____
General condition satisfactory?		_____	_____
Do all parts work as intended?		_____	_____

<b>Water Bath</b>	(IM 321)
Temperature? _____	

<b>Correlation</b>		
Correlation results available for previous year?	_____	_____

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTE:** HMA labs must also qualify as an aggregate lab.

cc: Materials Engineer	<b>Inspected By:</b>	_____
Contractor/Producer		
Ames	<b>Date Inspected:</b>	_____
File		



## Iowa Department of Transportation

### READY MIX/PCC PAVING LABS QUALITY CONTROL CHECKLIST

Contractor/Producer: \_\_\_\_\_ Location: \_\_\_\_\_

Certified Technician: \_\_\_\_\_ Certification No: \_\_\_\_\_

#### Inspection Checklist Items:

<b>Air Meter</b>	(IM 318)	<b>Yes</b>	<b>No</b>
Check meter using approved 5% pugs.		_____	_____
Is air meter clean?		_____	_____
Proper rod and mallet.		_____	_____
<b>Slump Cone</b>	(IM 317)		
Interior of cone free of dents or projections.		_____	_____
5/8" by 24" tamping rod.		_____	_____
Rigid, nonabsorbent base.		_____	_____
Equipment clean and free of hardened concrete.		_____	_____
<b>Beam Breaker</b>	(IM 316)		
Current annual calibration sheet		_____	_____
Equipment clean.		_____	_____
<b>Beam Molds</b>	(IM 328)		
Molds clean and free of dents		_____	_____
General condition of molds good.		_____	_____

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTE:** PCC labs must also qualify as an aggregate lab.

cc: Materials Engineer  
Contractor/Producer  
Ames  
File

**Inspected By:** \_\_\_\_\_

**Date Inspected:** \_\_\_\_\_